

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 03-208260

(43)Date of publication of application : 11.09.1991

(51)Int.Cl.

H01M 8/02

H01M 8/10

(21)Application number : 02-001064

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(22)Date of filing : 09.01.1990

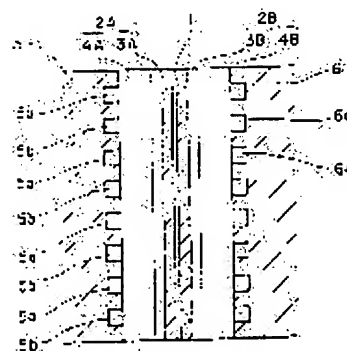
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## (54) MANUFACTURE OF CONNECTING BODY BETWEEN SOLID HIGH POLYMER ELECTROLYTE MEMBRANE AND ELECTRODE

(57)Abstract:

PURPOSE: To increase the reaction efficiency and to realize a high output by connecting a solid high polymer electrolyte membrane and a gas diffusion electrode in the condition to permeate in the reaction membrane of the gas diffusion electrode.

CONSTITUTION: Hydrophile reaction membranes 3A and 3B are formed at the ratio 0.7:7:3 of platinum of the mean particle diameter 50 $\mu\text{m}$ , a hydrophile carbon black of the mean particle diameter 450 $\mu\text{m}$ , and polytetrafluoroethylene of the mean particle diameter 0.3  $\mu\text{m}$ , and hydrophobic gas diffusion membranes 4A and 4B are formed at the ratio 7:3 of a hydrophobic carbon black of the mean particle diameter 420 $\mu\text{m}$  and polytetrafluoroethylene of the mean particle diameter 0.3  $\mu\text{m}$ . The reaction membranes 3 and the diffusion membranes 4 are superposed and rolled, and Pt 0.56mg/cm<sup>2</sup> is held to the reaction membrane 3 side in the hydrogen chloroplatinate oxidization and reduction method to make into gas diffusion electrodes 2A and 2B. To the



reaction membrane side of the electrodes 2, an alcohol solution of perfluorosulfuric acid polymer is spread. Two sheets of such gas diffusion electrodes 2 are connected at the reaction membrane sides, and a hot press is applied in the condition at 120 to 130°C and 60kg/cm<sup>2</sup> to make a connecting body. In such a way, the area the catalyst reaction is generated is increased, the adhesive strength is increased, and the moving resistance of H<sup>+</sup> can be reduced.

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## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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